ABSTRACT OF THE DISCLOSURE

A plasma processing system includes a magnetic field generator that can produce a magnetic field and a sheet optic element that can produce a light sheet capable of illuminating particles in a processing chamber of the system. An imaging device can acquire image data corresponding to the particles illuminated by the light sheet. The magnetic field generator, the sheet optic element and the imaging device can be positioned relative to one another to access the plasma. An image processor can process the image data so as to obtain the concentration of particles in the light sheet. A method of measuring particle concentration in a plasma processing system includes positioning the magnetic field generator, a sheet optic element and an imaging device relative to one another to access the plasma and obtaining the concentration of particles in the light sheet. A method of minimizing particles in the chamber is also provided.